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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,439	12/14/2001	Jun Tanaka	FUJI 19.257	5354
7590 09/06/2005			EXAMINER	
Rosenman & Colin LLP			TRAN, PHUC H	
575 Madison Avenue			ART UNIT	
New York, NY 10022-2585			PAPER NUMBER	
			2666	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/029,439

Applicant(s)

TANAKA ET AL.

Examiner

PHUC H. TRAN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7, 9-12, 14-16, 19 and 20 is/are rejected.  
7) ☒ Claim(s) 8, 13 and 17 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/14/01.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 7-9, 12, and 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 7, 9, 12, and 14 recite the limitation "a second deletion unit" in claim 7; "a third deletion unit" in claim 9; "a fourth deletion unit" in claim 12; "a fifth deletion unit" in claim 14. There is insufficient antecedent basis for this limitation in the claim 1.

- Regarding to claim 15, "a CAM" is not understood what it stands for.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-7, 9-12, 14-16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kozaki et al. (U.S. Patent No. 6021130).

- With respect to claim 1, Kozaki teaches a dynamic virtual channel management apparatus (e.g. the ATM switching system in Fig. 1), comprising: detection unit which detects an active virtual channel used by an arriving ATM cell (col. 10, lines 23-24); and management memory unit which manages management information about the active virtual channel detected the detection unit for each virtual channel (10 in fig. 7), wherein processing on a frame-by-frame basis applied to cells having a virtual channel identifier that matches that of the active virtual channel managed by the management memory unit (e.g. the PVC allocation circuit for allocate incoming cell to share memory).

- With respect to claims 2, and 11, Kozaki comprises a first registration unit which registers a virtual channel identifier of an arriving cell into the management memory unit when the virtual channel identifier of the arriving cell not managed by the management memory unit (col. 2, lines 55-61).

- With respect to claim 3, Kozaki discloses wherein the management memory unit comprises: a translation table that converts the virtual channel identifier contained in cell header of the into an internal management number for internal management (col. 14, lines 59-63); and frame management table that stores information for frame-by-frame processing each virtual channel such a manner as to correspond to the internal management number (col. 14, lines 65-67).

- With respect to claim 4, Kozaki teaches an internal management number writing unit which writes the internal management number the header of the cell (); and

an internal management number reading unit that retrieves the internal management number from the cell header of the cell, and uses the retrieved internal management number for referring the frame management table ().

- With respect to claim 5, Kozaki wherein the internal management number is transmitted in parallel with the cell data, and is used for referring to the frame management table.

- With respect to claims 6, 7, and 9, Kozaki teaches timer unit which is provided for each virtual channel managed by the management memory unit (244 in Fig. 12);

a timer start unit which starts the timer unit each time a head cell of a frame arrives (col. 15, lines 35-36); and

a deletion unit which deletes from the management memory unit an entry of a virtual channel that corresponds to a last cell of a frame arriving after the timer unit indicates a time-out (col. 15, lines 39-44).

- With respect to claims 10, and 14, Kozaki comprises a disapproving unit that disapproves registering of a virtual channel identifier of a cell into the management memory unit if belonging to a virtual channel that is not managed arrives while the management memory unit is fully occupied (col. 2, lines 46-50).

- With respect to claim 12, Kozaki discloses comprising a deletion unit which finds a virtual channel that is close to a time-out of the timer unit, and forcing the found virtual channel to be given a time-out, and deletes an entry of the found virtual channel from the management

memory when a cell having a virtual channel identifier that is not managed arrives while the management memory unit is fully occupied (col. 15, lines 55-67).

- With respect to claim 15, Kozaki discloses wherein the management memory unit is implement as a CAM (col. 12, lines 57-60).

- With respect to claim 16, Kozaki teaches a cell memory which stores cells (shared buffer in Fig. 7);

frame management unit which keeps a record of each virtual channel registered in the management memory unit as to whether a head cell of a frame was passed for storage into the cell memory discarded (e.g. PVC register in Fig. 5),

wherein a determination is made by referring to the frame management unit as to whether to pass or discard subsequent cells said frame (col. 3, lines 1-5).

- With respect to claim 18, Kozaki cell quantity counting unit that counts a number indicative of how many cells have arrived for each virtual path (col. 12, line 62);

marking unit which marks a on a frame-by-frame basis when counted number of the cell quantity counting unit exceeds a predetermined number, and discarding unit which discards cells that are marked when an accumulated cell amount the cell memory exceeds threshold (col. 13, lines 30-35; col. 15, lines 1-10).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kozaki et al. (U.S. Patent No. 6021130) in view of Soumiya et al. (U.S. Patent No. 5696764).

- With respect to claims 19-20, Kozaki discloses all the aspect of the claimed invention as set forth above but fails to teach plurality of cell memories, which store cells for respective priority, levels; and distribution unit, which distributes arriving, cells to corresponding cell memory according to a priority level predetermined for each virtual channel. Soumiya teaches store cells for respective priority and distribution to the store (e.g. Fig. 8 show the quality class 71b and difference buffer 71c). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to implement the method of determining the priority of cell and distribution in the stores for quality of service.

***Allowable Subject Matter***

6. Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. Claims 13 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Soumiya et al. (U.S. Patent No. 5696764) discloses ATM exchange for monitoring congestion and allocating and transmitting bandwidth-guaranteed and non-bandwidth-guaranteed connection calls.
- Smith et al. (U.S. Patent No. 6222823 B1) discloses broadband switching system.
- Lee et al. (U.S. Patent No. 5629936) discloses control of consecutive packet loss in a packet buffer.
- Tanaka et al. (U.S. Patent No. 6504824 B1) discloses apparatus and method for managing rate band.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H. TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAO SEEMA can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuc Tran  
Assistant Examiner  
Art Unit 2664

P.t  
9/2/05

A handwritten signature in black ink, appearing to be 'Dang Ton', written in a cursive style.

DANG TON  
PRIMARY EXAMINER